1691

Control Code Distributor

INSTALLATION INSTRUCTIONS

The AD1691 and the ADS1691FX Control Code Distributors provide a maximum of 64 buffered Control Code outputs to AD receivers from a single Control Code Source input. Each output will drive up to 5000 feet (1524m) on 18AWG, shielded, twisted pair cable. One Control Code Distributor processes information for a maximum of 64 receivers. All versions of the 1691 are compatible with all American Dynamics Matrix Switching Systems and Control Codes sources.

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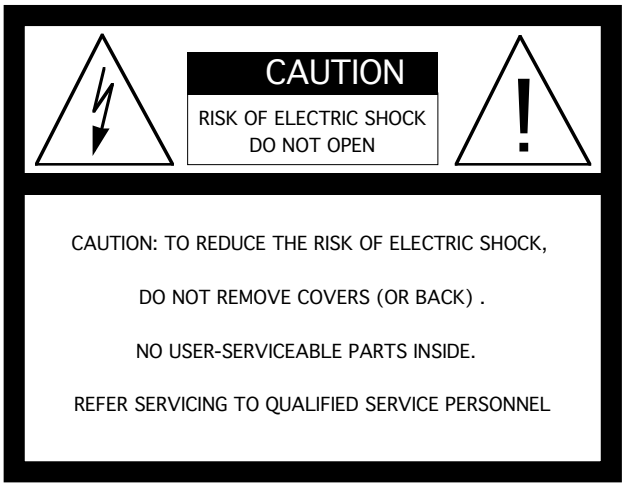
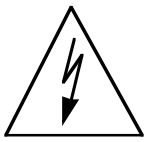
AMERICAN DYNAMICS

The installation of this product should be made by qualified service personnel and should conform to all local codes.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVERS (OR BACK) .
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

WARNING

To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.

This equipment has been tested and found to comply with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: 1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation.

UNPACKING AND INSPECTION

Unpack carefully. This is an electronic product and should be handled as such. Compare the items received with the packing list with your order.

Be sure to save:

1. The shipping cartons and insert pieces. They are the safest material in which to make future shipments of the product.
2. The IMPORTANT SAFEGUARDS sheet.
3. These Installation and Operating Instructions.

MAINTENANCE

User maintenance of this unit is limited to external cleaning and inspection. For specific recommendations refer to the IMPORTANT SAFEGUARDS sheet packaged with this product.

INSTALLATION AND SERVICE

If you require information during installation of this product or if service seems necessary, contact the Sensormatic Repair and Service Department at (800) 442-2225. You must obtain a Return Authorization Number and shipping instructions before returning any product for service.

Do not attempt to service this product yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified personnel.

QA301D

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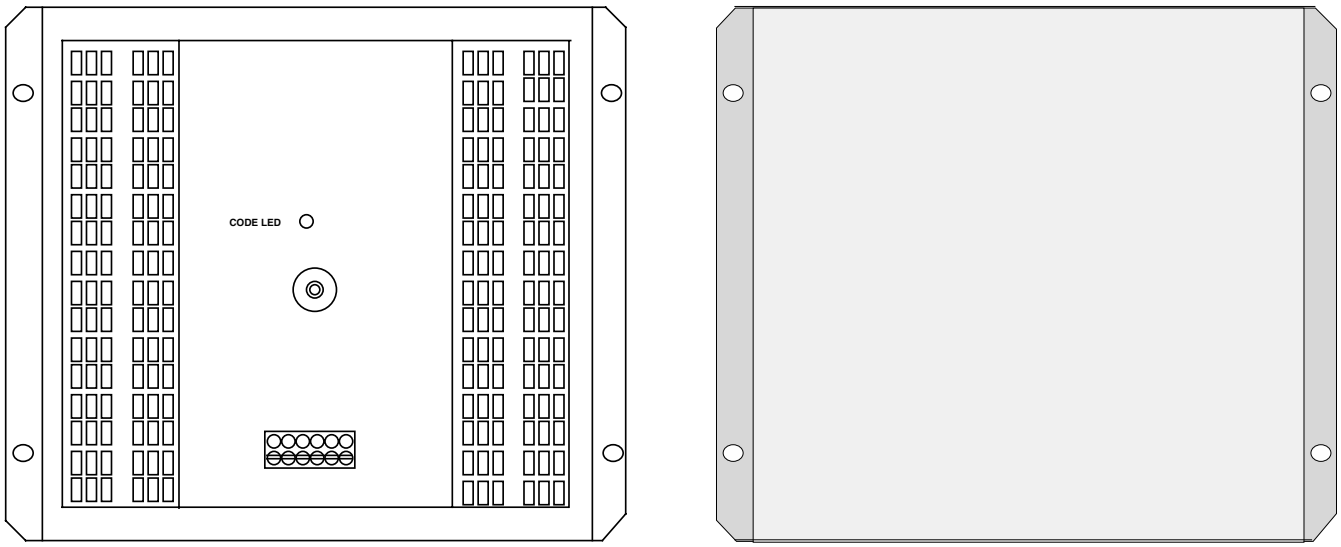

Rear View Front View

Figure 1 - 1691 Control Code Distributor

DESCRIPTION

The AD1691 and the ADS1691FX Control Code Distributors provide a maximum of 64 buffered Control Code outputs to AD receivers from a single Control Code Source input. Each output will drive up to 5000 feet (1524m) using 18AWG, shielded, twisted pair cable.

One Control Code Distributor processes information for a maximum of 64 receivers. The AD1691 is compatible with all American Dynamics Matrix Switching Systems and Control Code sources.

FEATURES

Screw Terminal Wire Connectors

Green LED Code Indicator

64 Buffered Outputs

Expandable

Switching System Compatibility

MAINTENANCE

The 1691 Control Code Distributor contains no user-serviceable parts.

It is recommended that the following checks be carried out on a routine basis:

One month after installation and every six months thereafter, check the tightness and security of all external fastenings.

Every six months check all electrical cables for signs of wear. Replace if necessary.

ABOUT THIS MANUAL

Throughout this manual, when an instruction is the same for all versions of the Code Distribution Unit, it is simply called the 1691. When the instruction is for a specific 1691 model, it is identified by the respective model designation (AD1691 or ADS1691FX).

Installation

This installation should be made by qualified service personnel and should conform to all local codes. Safeguards must be taken to avoid unintentional operation by employees, janitors, and cleaners working about the premises, by falling objects, by customers, by building vibration, and by similar causes.

Mounting

The 1691 Code Distributors are designed for indoor use only. The units may be surface mounted via the mounting openings on each side of the 1691 housing (total of four mounting openings).

The overall dimensions for all versions of the 1691 unit are as follows (see Figure 2):

Height (top to bottom): 12” (305mm)

Width (side to side): 14” (356mm)

Depth (front to back): 4” (102mm)

Mounting Surfaces

Mount all versions of the 1691 with 1/4-inch diameter bolts appropriate to the type of mounting surface.

Wood Surfaces

For mounting to wood studs, use lag bolts (with a drilled pilot hole) or wood screws which penetrate the wood for at least one and a half inches (1.5”).

Concrete Surfaces

In concrete, use lead or plastic anchor expansion bolts with a minimum pull-out rating of 25 pounds.

Steel Surfaces

For steel surfaces, drill four clearance holes and use bolts with lockwashers and nuts.

Drywall Surfaces

For drywall (gypsum) surfaces, use toggle bolts. Note that the drywall surface must be at least 3/8”.

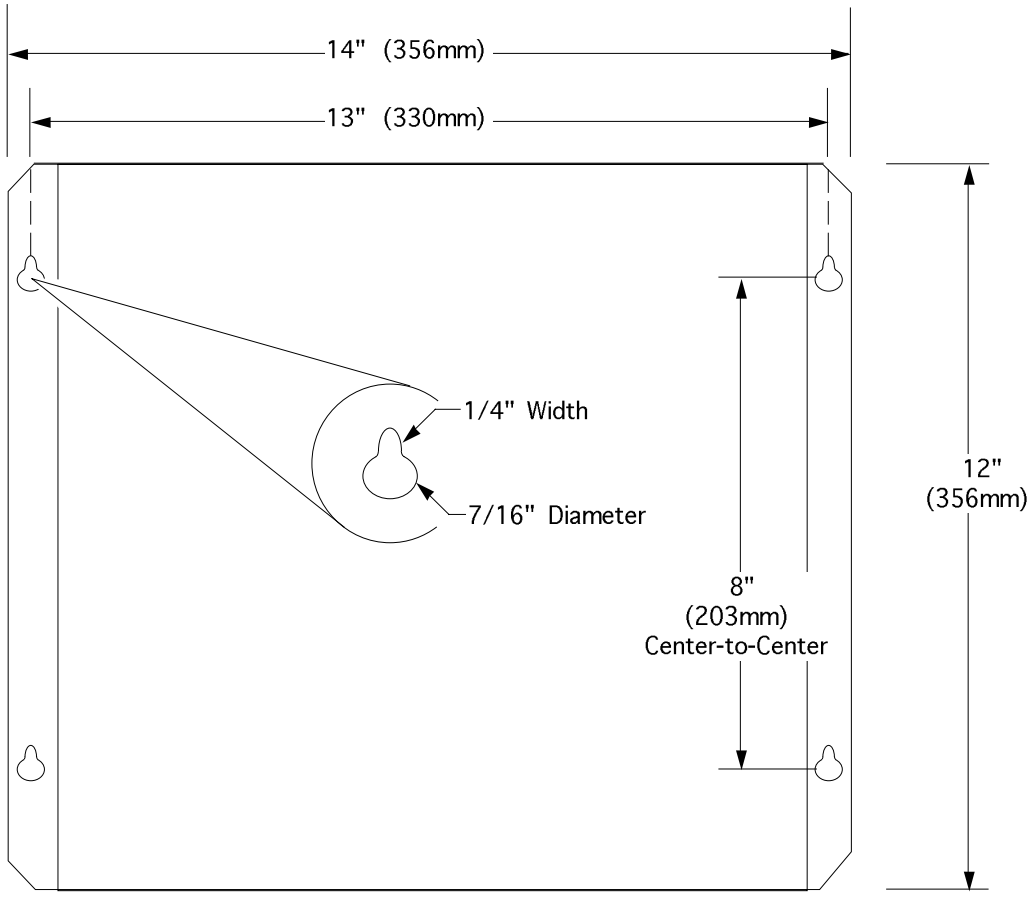

Figure 2 - 1691 Dimensions (all versions) and Mounting Specifications

Connections

Model AD1691 Power Connections

> **- WARNING -**
> Do not connect the AD1691 to the primary power source until ALL connections and switch settings have been completed and verified.

The AD1691 is supplied with a wall transformer (AD part number TP8002) which can be connected to an outlet for primary power.

Connect one of the 12 Volt AC leads from the TP8002 Transformer to one of the designated AC terminals on the AD1691 (see Figure 3).

Connect the second 12 Volt AC lead from the TP8002 Transformer to the remaining AC terminal on the AD1691.

Plug the TP8002 Transformer into a suitable 120VAC power source (wall outlet, extension cord, etc.).

Code Source Connections

The AD1691 has three terminals for receiving control code from a suitable Control Code Source such as the AD1202 P/T Controller. The terminals are designated **B** for black, **W** for white, and **S** for shield.

B Connect a black code wire from the B terminal of the Control Code Source to the B terminal of the AD1691 Control Code Distributor (see Figure 3).

W Connect a white code wire from the W terminal of the Control Code Source to the W terminal of the AD1691 Control Code Distributor.

NOTE: A 120Ω 1/4Watt termination resistor must be inserted between the B and the W code wires (see Figure 3-A).

S Connect one end of the shield cable to the S terminal of the Control Code Source. Connect the opposite end of the shield cable to the S terminal of the AD1691 Control Code Distributor.

NOTE: Use 18 Awg, shielded, 2-wire cable, Belden 8760 or equivalent for code line connections. The maximum cable length is 5000 feet. For plenum wiring, use Belden 88760 or equivalent.

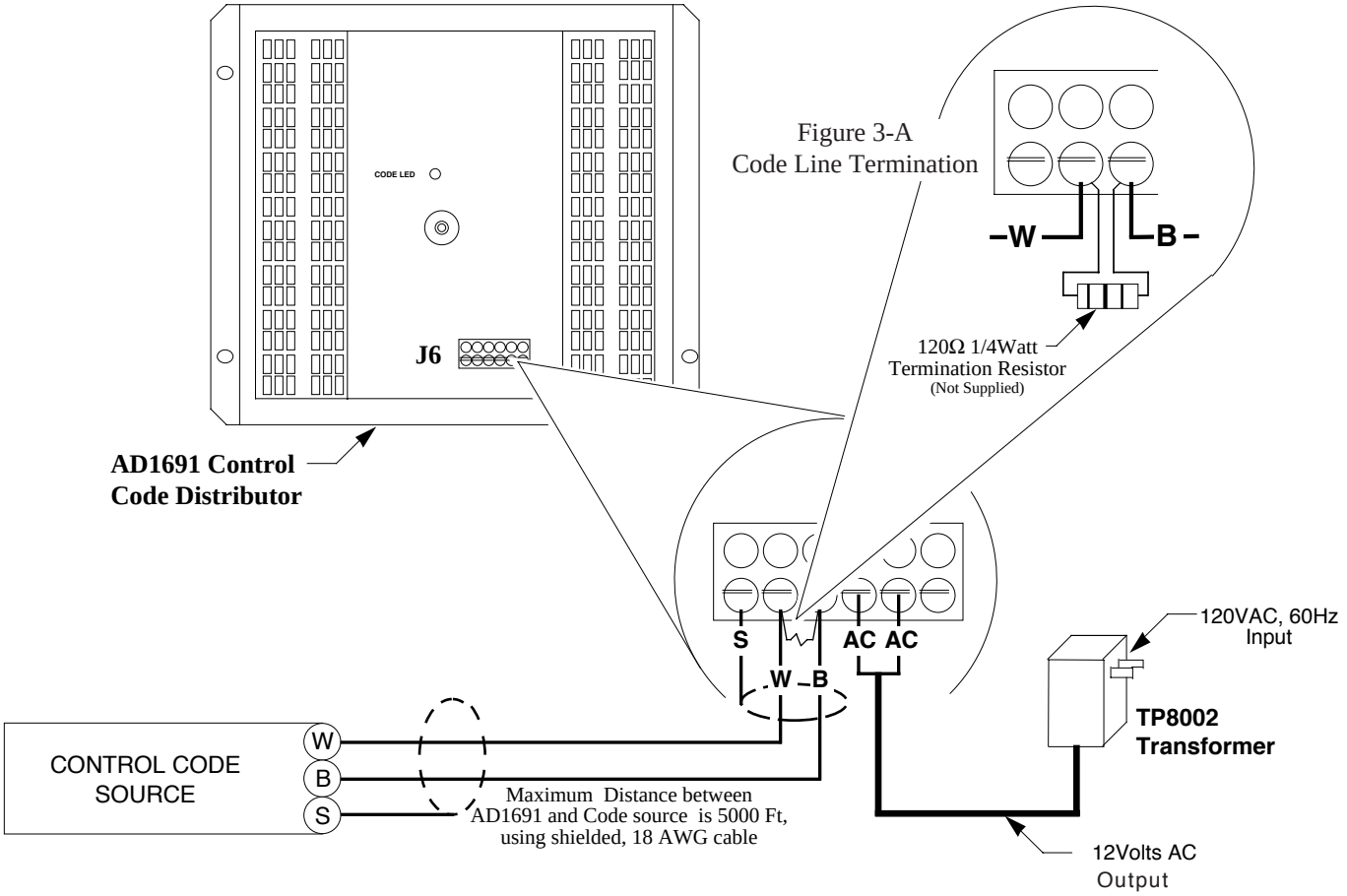

Figure 3 -- AD1691 Power and Code Source Connections

Model ADS1691FX Power Connections

- WARNING -

Do not connect the ADS1691FX to the primary power source until ALL connections and switch settings have been completed and verified.

The ADS1691FX is provided with a separate power supply (Sensormatic part number 0300-0914-02) that includes a Euro style IEC 320 type inlet.

A suitable detachable cord should be connected between the IEC 320 inlet and the power source. The cord should conform to all specific country and locality code requirements.

- WARNING -

Connection to any other voltage source may result in damage to the ADS1691FX.

On the secondary side of the power supply, connect only the COM and the 12V output lines to the ADS1691FX (see Figure 4).

- CAUTION -

For the 230V power supply (Sensormatic part number 0300-0914-02), verify that the selector switch is set to "240". The selector switch is located adjacent to the IEC 320 inlet. If any other voltage is indicated, remove the assembly, select the "240" setting and reinsert the assembly, allowing it to snap into place.

Code Source Connections

The ADS1691FX has three terminals for receiving control code from a suitable Control Code Source such as the AD1202 P/T Controller. The terminals are designated **B** for black, **W** for white, and **S** for shield.

B Connect a black code wire from the B terminal of the Control Code Source to the B terminal of the ADS1691FX Control Code Distributor (see Figure 4).

W Connect a white code wire from the W terminal of the Control Code Source to the W terminal of the ADS1691FX Control Code Distributor.

NOTE: A 120Ω 1/4Watt termination resistor must be inserted between the B and the W code wires (see Figure 4-A).

S Connect one end of the shield cable to the S terminal of the Control Code Source. Connect the opposite end of the shield cable to the S terminal of the ADS1691FX Control Code Distributor.

NOTE: Use 18 Awg, shielded, 2-wire cable, Belden 8760 or equivalent for code line connections. The maximum cable length is 5000 feet.

Figure 4-A
Code Line Termination

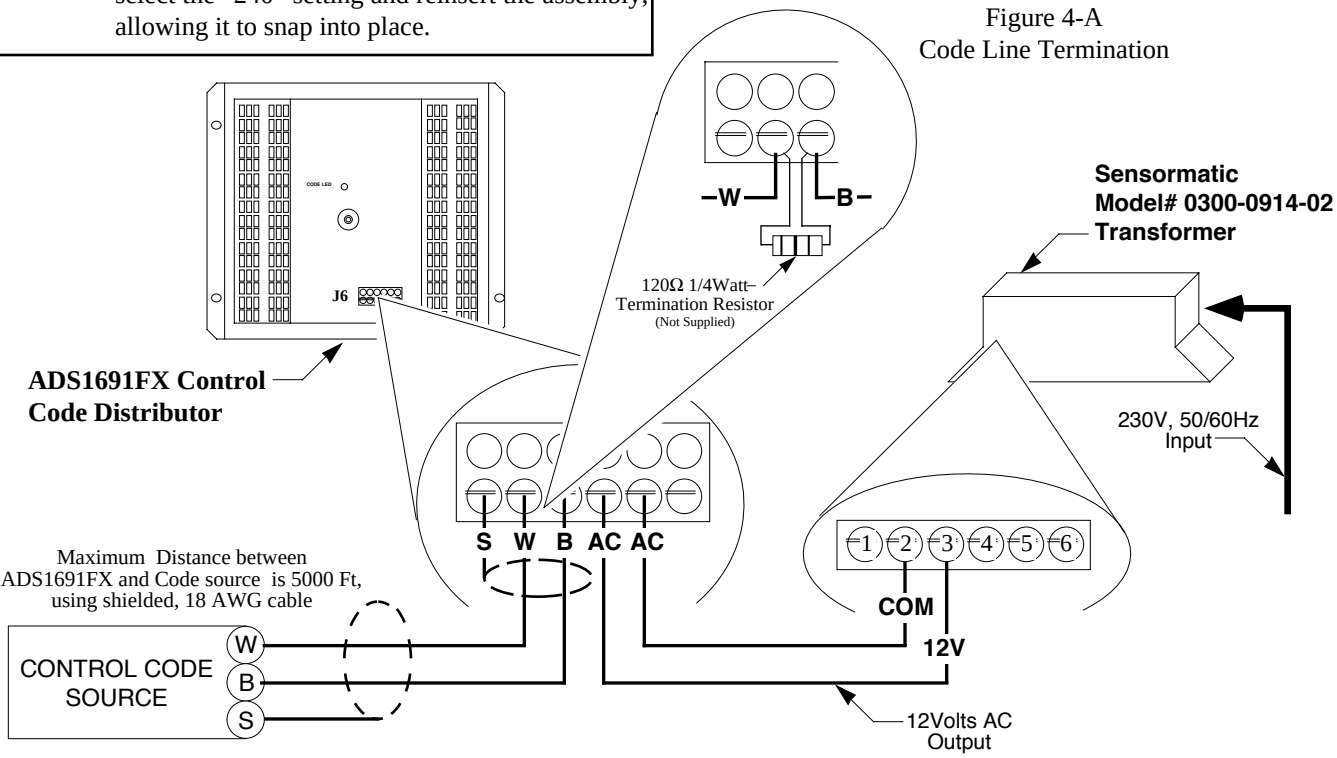

Figure 4 -- ADS1691X Power and Code Source Connections

Code Output Connections - All Models

The 1691 Code Distribution Unit provides 64 code line outputs from a single code line input.

Each of the 64 code line outputs is through individual external connectors each with three output terminals for camera control commands (camera pan/tilt/lens/preset/aux) to AD Manchester Control Code units, such as camera site receivers.

Each of the three output terminals are designated **B** for black, **W** for white, and **S** for shield.

B Connect a black code wire from the B terminal on the 1691 to the B terminal of a suitable Manchester Code receiver (see Figure 3, Page 3, or Figure 4, Page 4).

W Connect the white code wire from the W terminal on the 1691 to the W terminal of a suitable Manchester Code receiver.

S Connect one end of the shield cable *between* the 1691 and the receiver to the S terminal. Connect the opposite end of the shield cable to the S terminal of the receiver.

NOTE: AD Receivers feature built-in termination on their logic boards. Verify the termination requirements of non AD units before completing the connections.

NOTE: Use 18 Awg, shielded, 2-wire cable, Belden 8760 or equivalent for code line connections. The maximum cable length is 5000 feet. For plenum wiring, use Belden 88760.

NOTE: Tables One and Two (pages 6 and 7, respectively), provide space to record basic connection information between the 1691 Code Distribution Unit and up to 64 code receivers.

Daisy Chain Connection

Each code line can accommodate a maximum of three code-controlled units in a "Daisy Chain" configuration of less than 500 feet.

NOTE: Terminate only the *last* unit on the code line in 120 ohms.

If additional equipment is required on a code line, or of longer distances are involved, Code Distribution Units must be used. Each code line can accommodate a maximum of three code receivers in a "daisy chain" configuration of less than 5000 feet, as illustrated in Figure 5, below). The last unit in the daisy chain must be terminated with a 120Ω 1/4 Watt resistor.

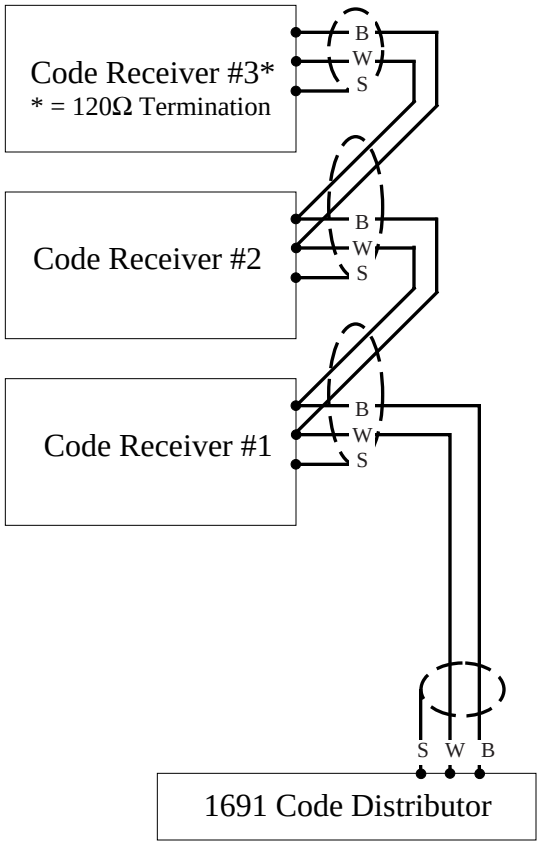

Figure 5 -- 1691 Daisy Chain Configuration

Table 1 - 1691 Control Code Distributor Connection Table

Code Outlet Terminal	Code Destination (Receiver)	Wire Size	Wire Color	Wire Length
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				

Table 2 - 1691 Control Code Distributor Connection Table

Code Outlet Terminal	Code Destination (Receiver)	Wire Size	Wire Color	Wire Length
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
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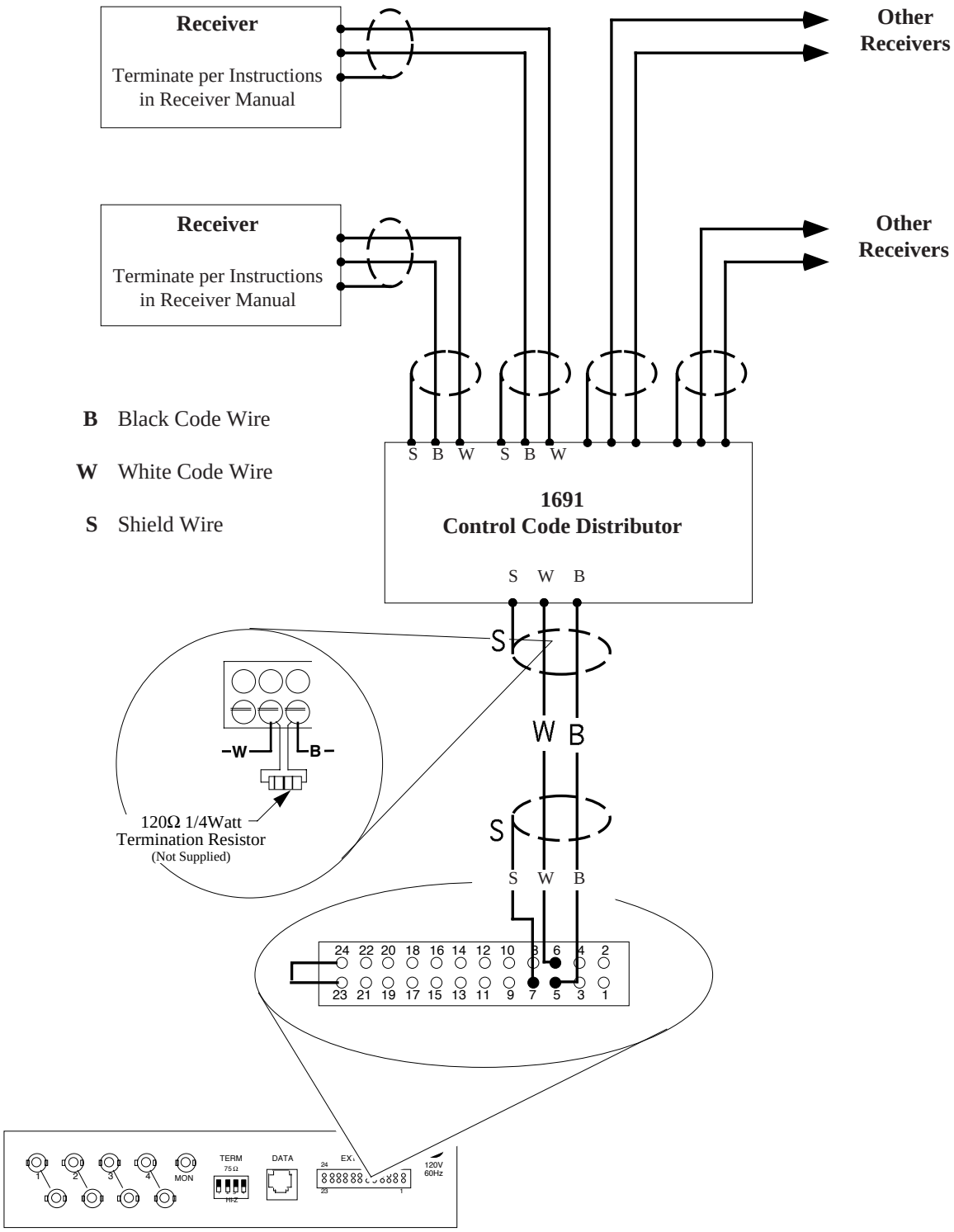
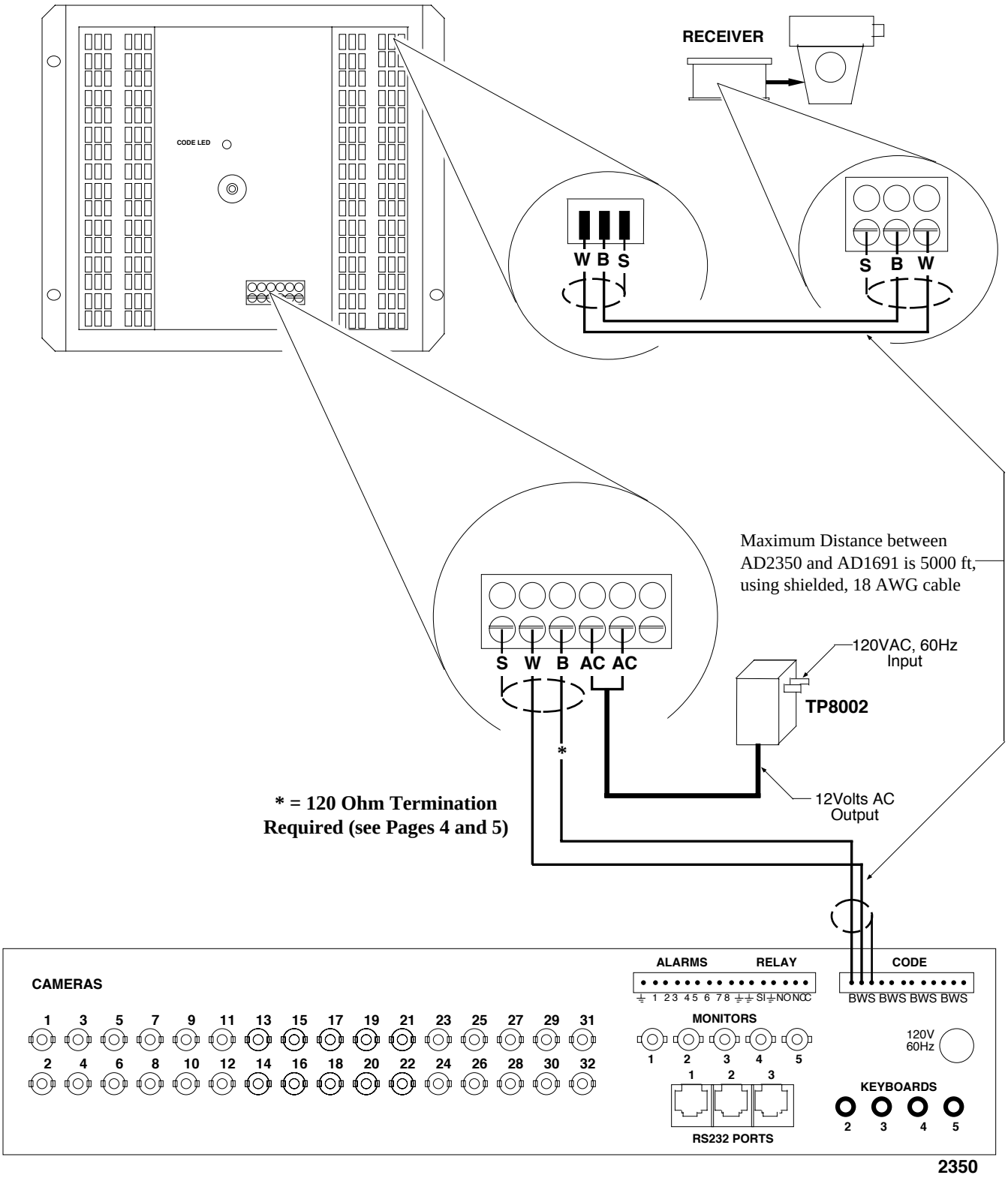
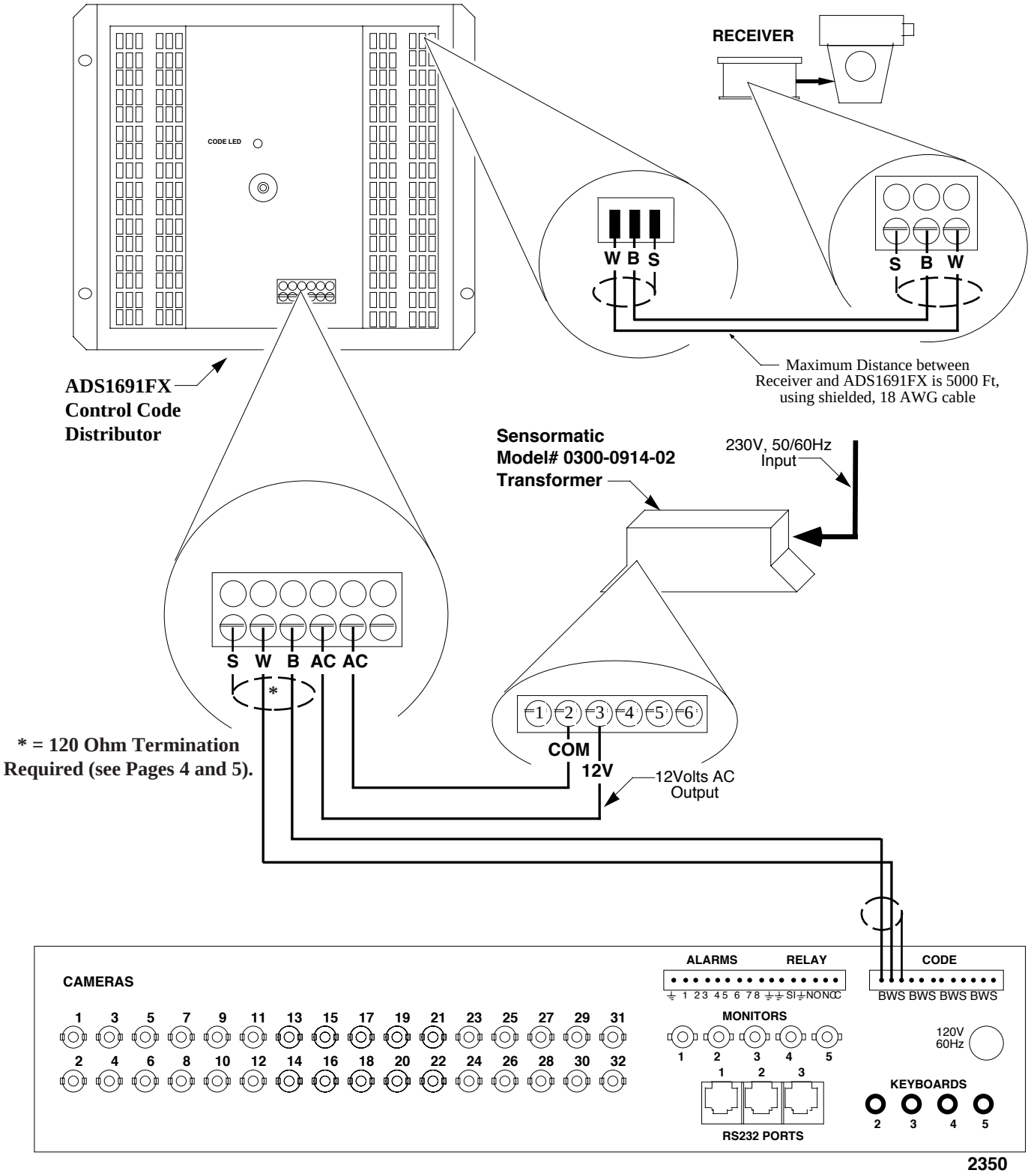
56				
57				
58				
59				
60				
61				
62				
63				
64				

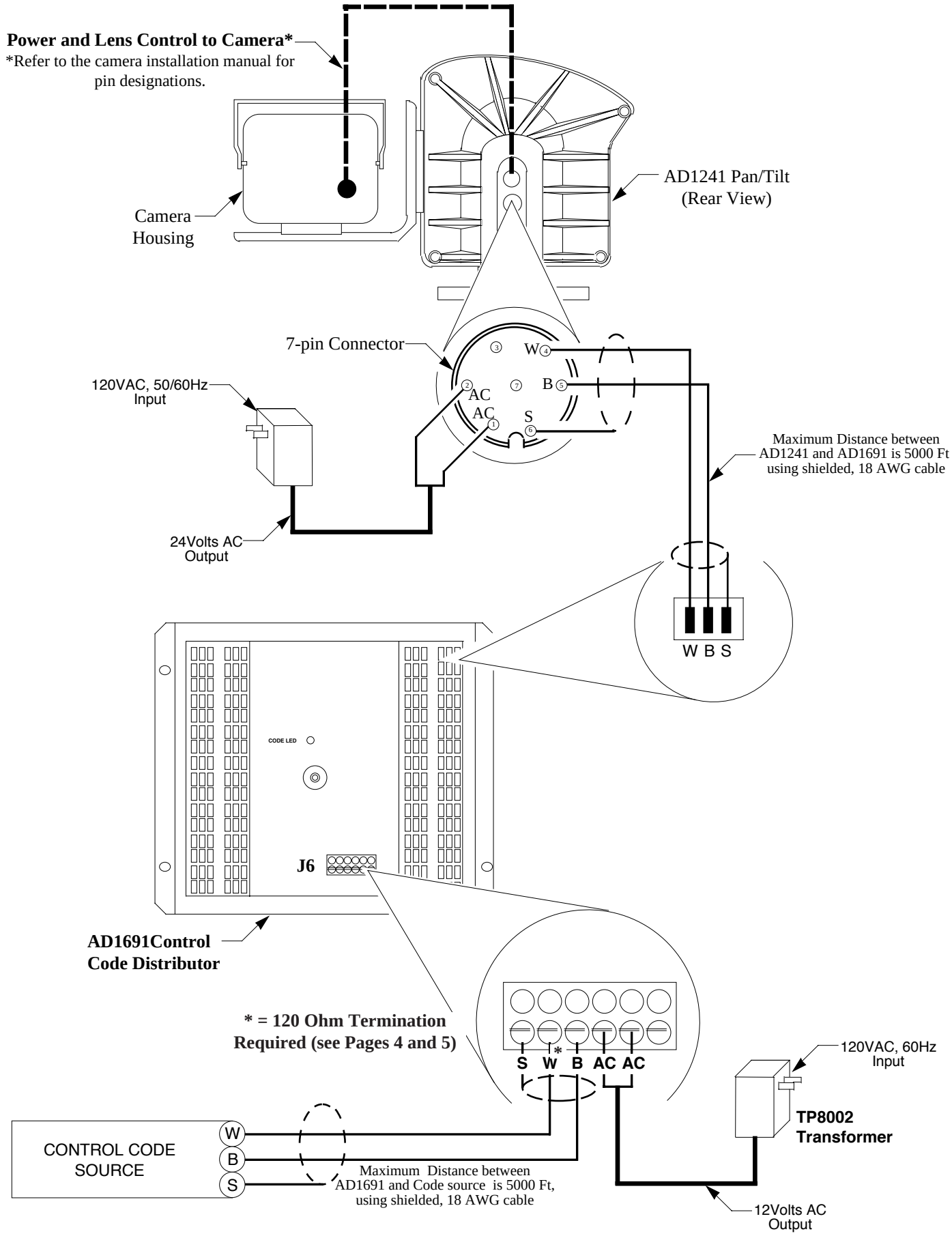


AD1202 Pan/Tilt Controller

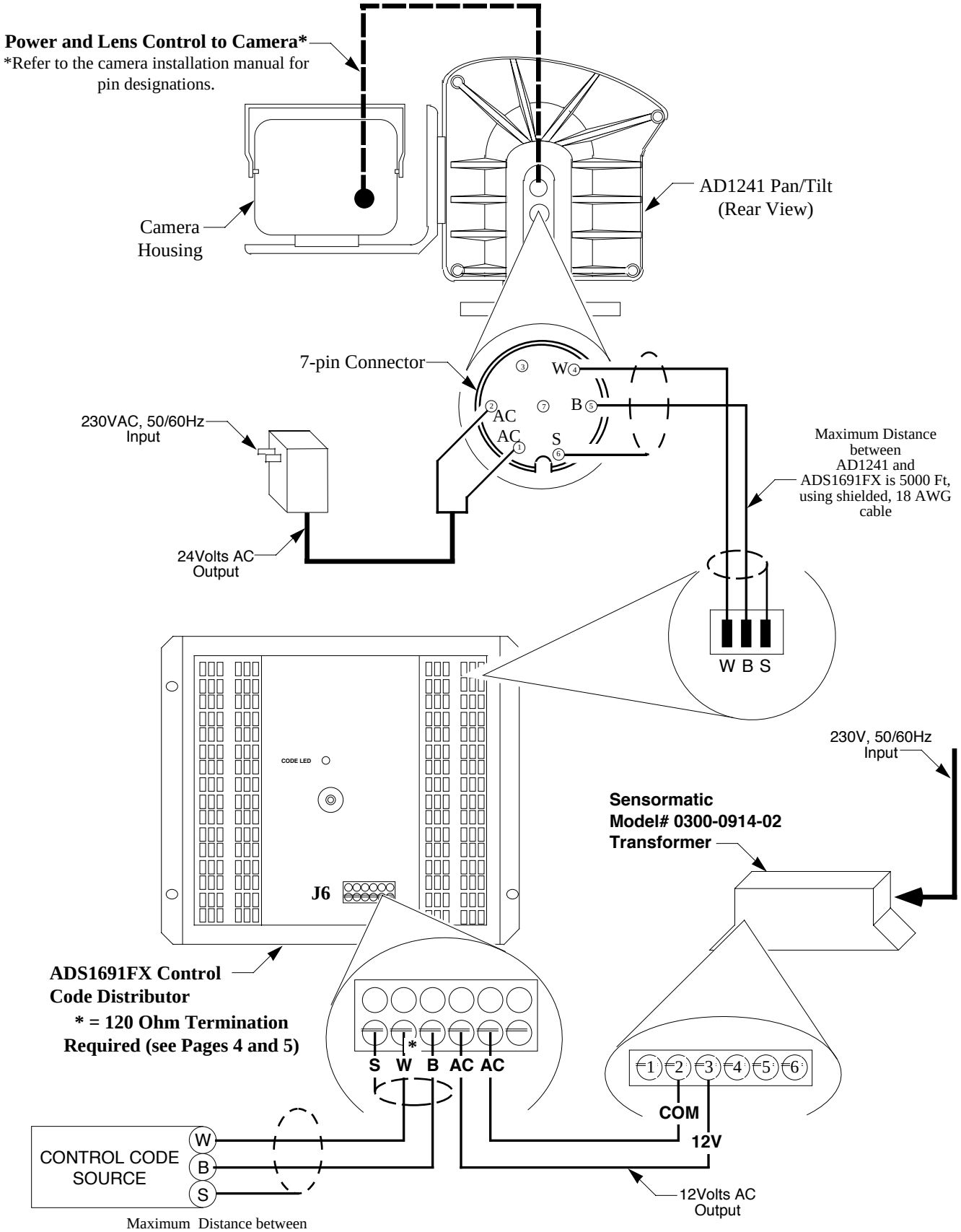

RECEIVER
CODE LED
W B S
S B W
S W B AC AC
Maximum Distance between AD2350 and AD1691 is 5000 ft, using shielded, 18 AWG cable
120VAC, 60Hz Input
TP8002
12Volts AC Output
* = 120 Ohm Termination Required (see Pages 4 and 5)
CAMERAS
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
ALARMS
RELAY
CODE
1 2 3 4 5 6 7 8 SI NO NC C
BWS BWS BWS BWS
MONITORS
1 2 3 4 5
120V 60Hz
1 2 3
KEYBOARDS
2 3 4 5
RS232 PORTS
2350

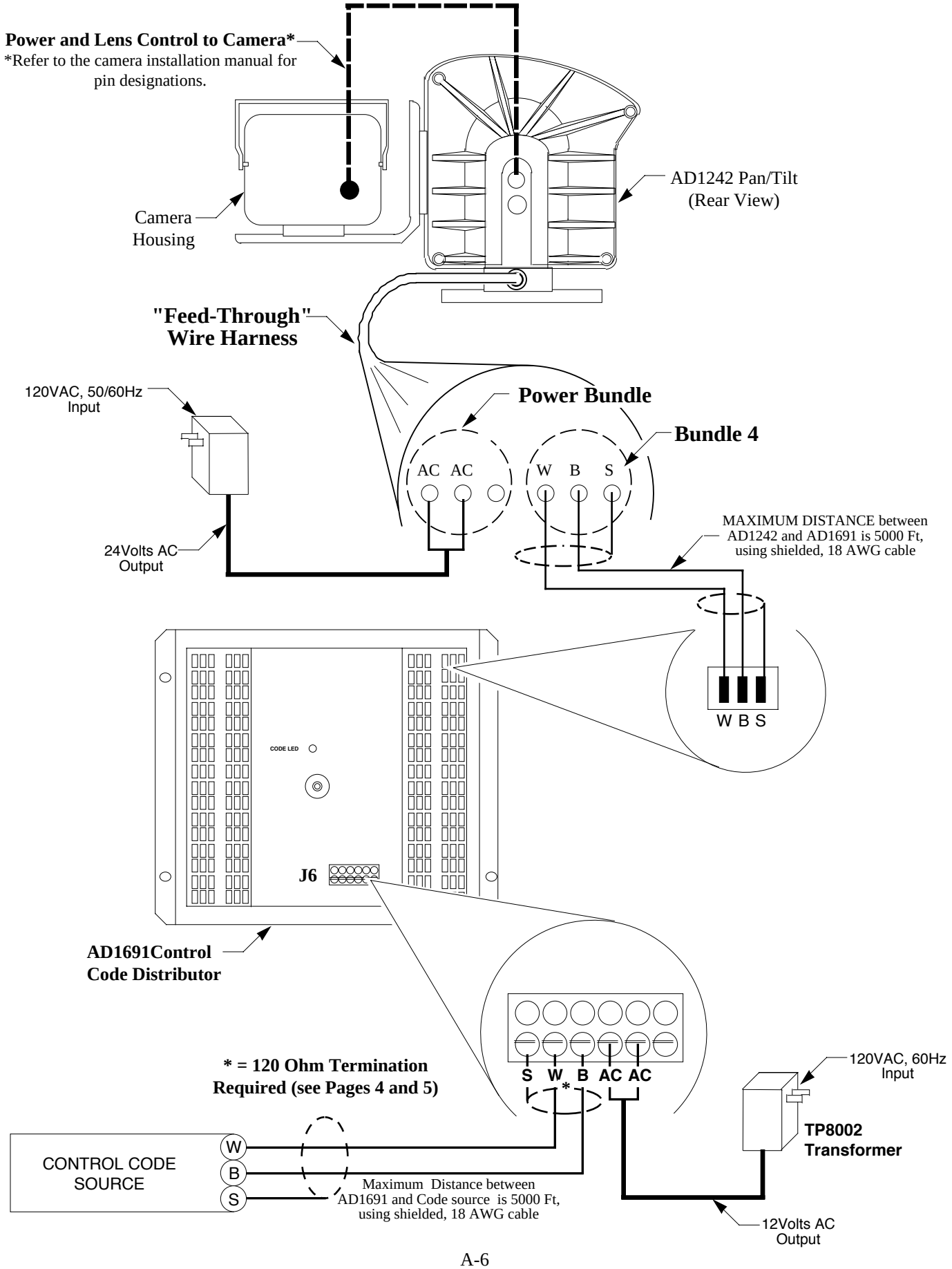
TYPICAL SYSTEM CONNECTIONS
ADS1691FX FROM AD2350 SWITCHER


RECEIVER
CODE LED
W B S
S B W
Maximum Distance between Receiver and ADS1691FX is 5000 Ft, using shielded, 18 AWG cable
ADS1691FX Control Code Distributor
Sensormatic Model# 0300-0914-02 Transformer
230V, 50/60Hz Input
S W B AC AC
*
1 2 3 4 5 6
COM
12V
12Volts AC Output
* = 120 Ohm Termination Required (see Pages 4 and 5).
CAMERAS
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
ALARMS
RELAY
1 2 3 4 5 6 7 8 SI NO NC
CODE
BWS BWS BWS BWS
MONITORS
1 2 3 4 5
1 2 3
RS232 PORTS
120V 60Hz
KEYBOARDS
2 3 4 5
2350

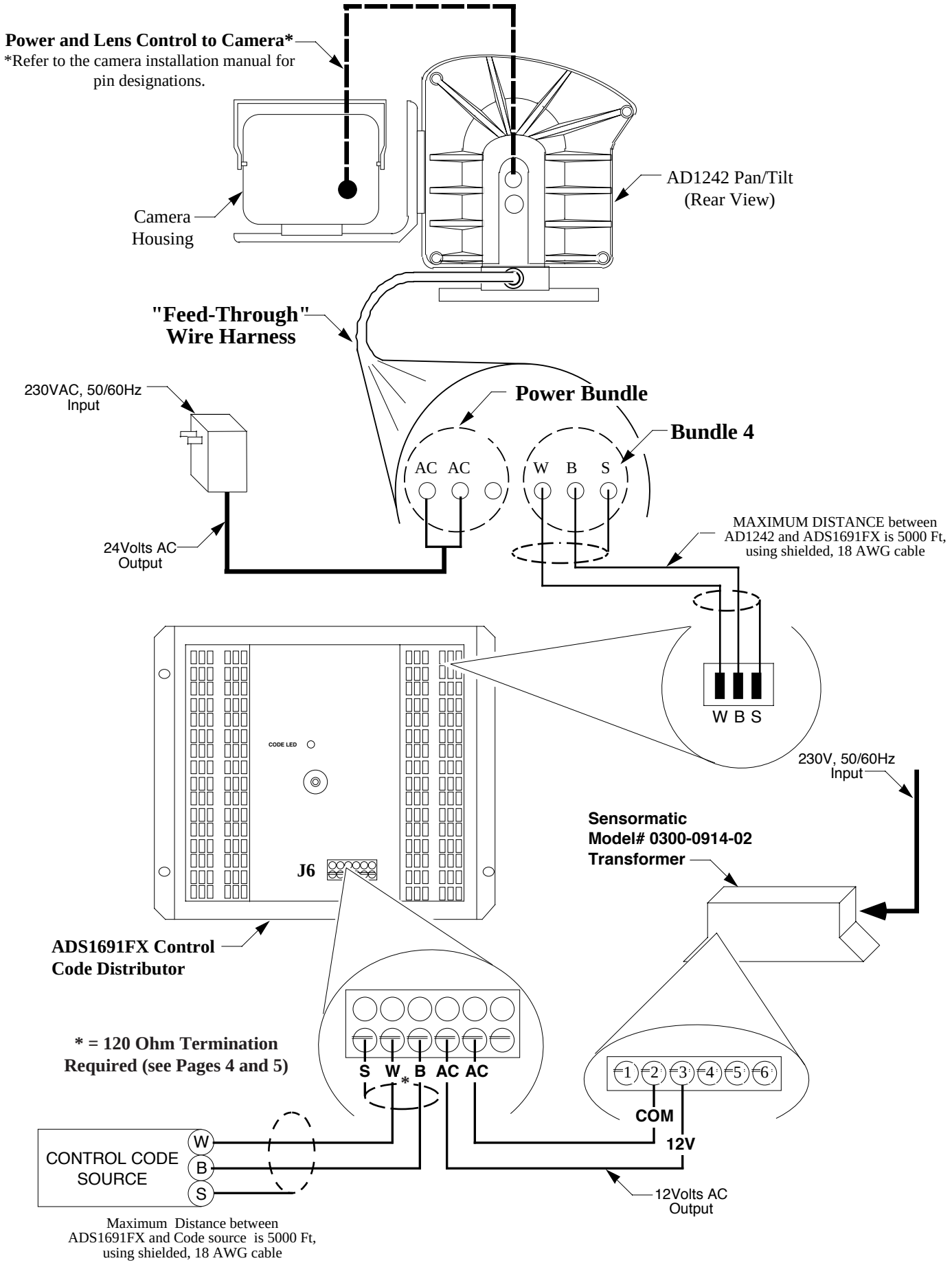

Power and Lens Control to Camera*
*Refer to the camera installation manual for pin designations.
Camera Housing
AD1241 Pan/Tilt (Rear View)
7-pin Connector
W
B
AC
AC
S
120VAC, 50/60Hz Input
24Volts AC Output
Maximum Distance between AD1241 and AD1691 is 5000 Ft using shielded, 18 AWG cable
W B S
CODE LED
J6
AD1691Control Code Distributor
* = 120 Ohm Termination Required (see Pages 4 and 5)
S W * B AC AC
120VAC, 60Hz Input
TP8002 Transformer
CONTROL CODE SOURCE
W
B
S
Maximum Distance between AD1691 and Code source is 5000 Ft, using shielded, 18 AWG cable
12Volts AC Output

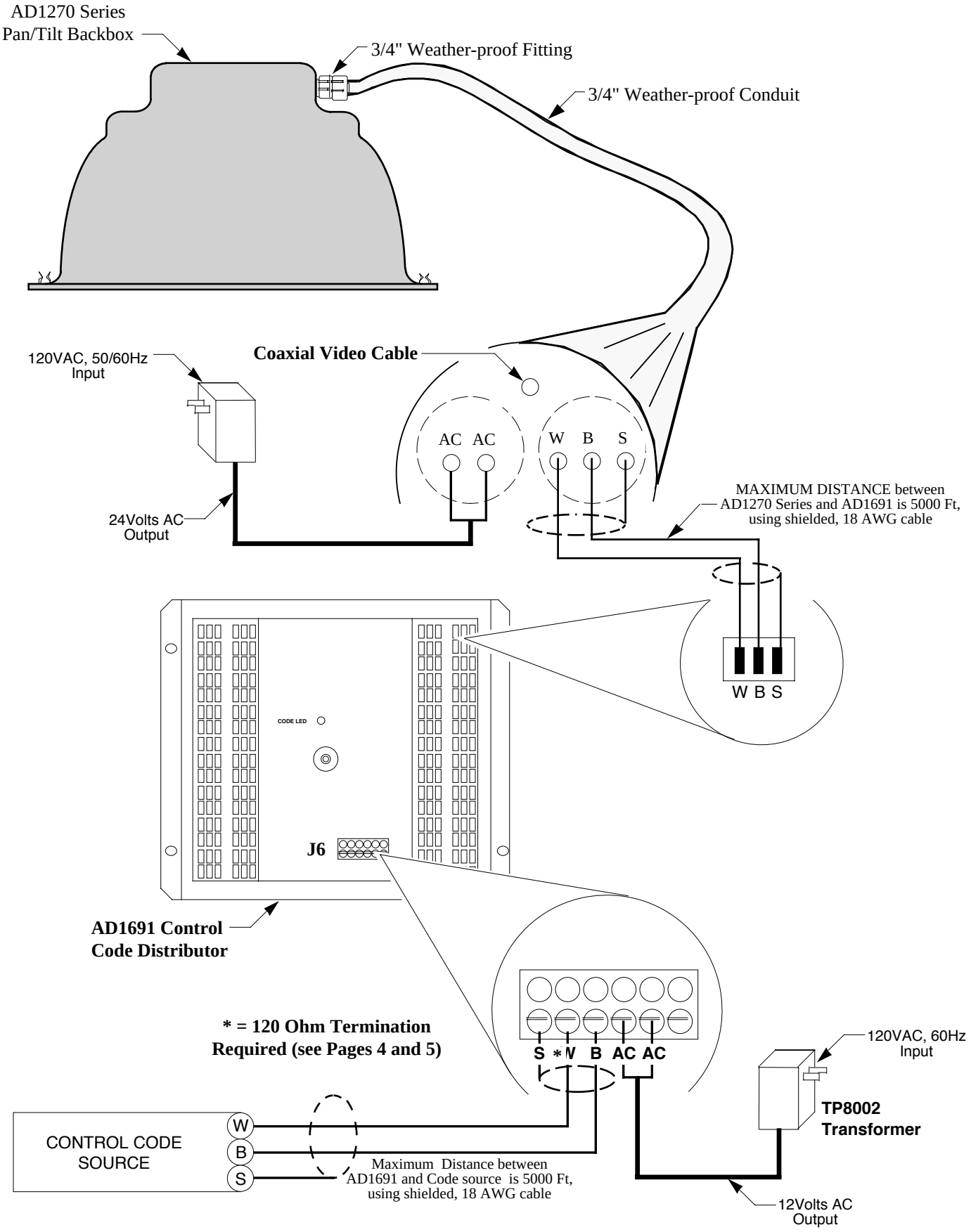
TYPICAL SYSTEM CONNECTIONS
ADS1691FX CONTROL CODE DISTRIBUTOR TO AD1241 PAN/TILT



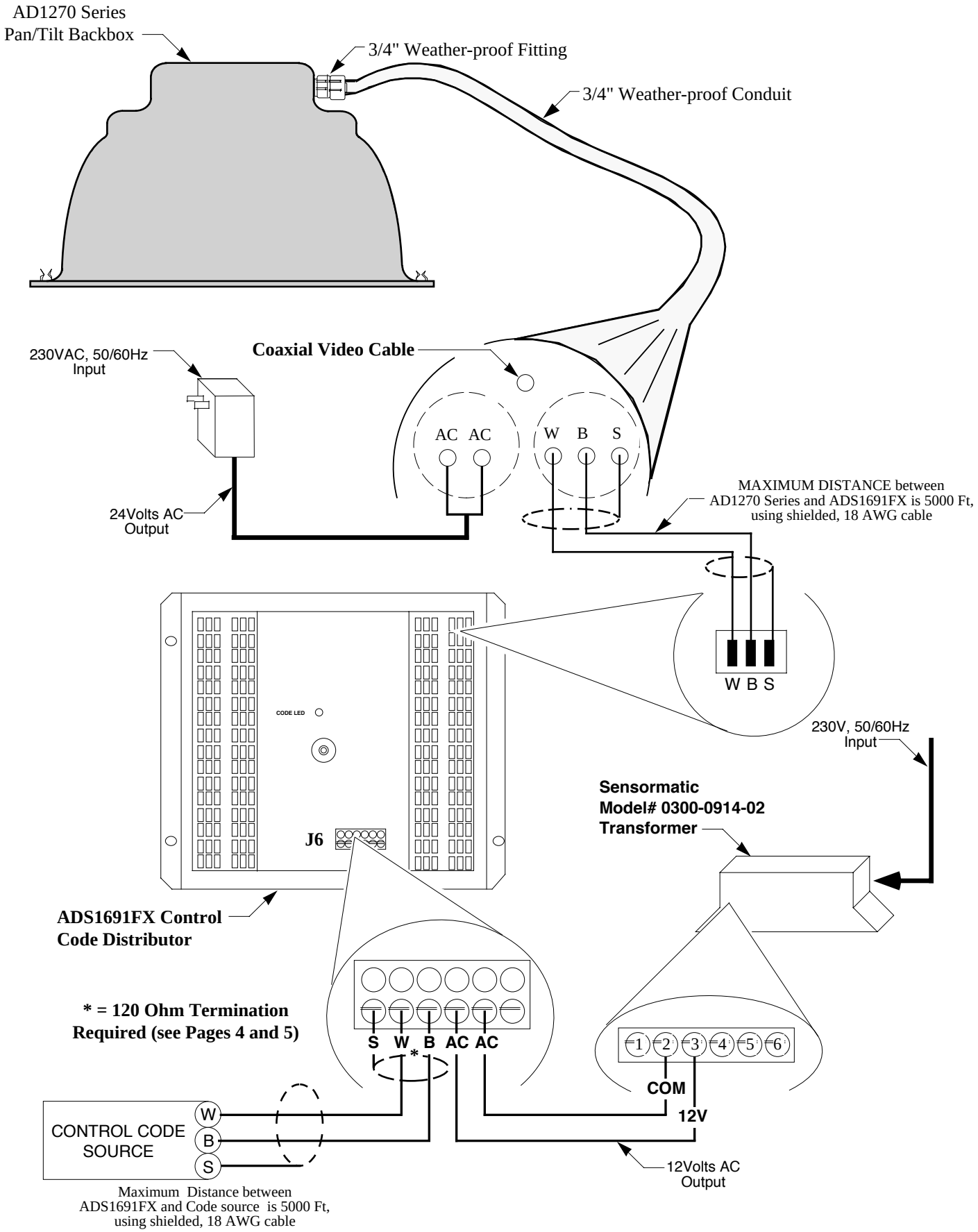

Power and Lens Control to Camera*
*Refer to the camera installation manual for pin designations.
Camera Housing
AD1242 Pan/Tilt (Rear View)
"Feed-Through" Wire Harness
120VAC, 50/60Hz Input
Power Bundle
Bundle 4
AC AC
W B S
24Volts AC Output
MAXIMUM DISTANCE between AD1242 and AD1691 is 5000 Ft, using shielded, 18 AWG cable
W B S
CODE LED
J6
AD1691Control Code Distributor
* = 120 Ohm Termination Required (see Pages 4 and 5)
S W B AC AC
*
120VAC, 60Hz Input
TP8002 Transformer
CONTROL CODE SOURCE
W
B
S
Maximum Distance between AD1691 and Code source is 5000 Ft, using shielded, 18 AWG cable
12Volts AC Output

TYPICAL SYSTEM CONNECTIONS
ADS1691FX CONTROL CODE DISTRIBUTOR TO AD1242 PAN/TILT


Power and Lens Control to Camera*
*Refer to the camera installation manual for pin designations.
Camera Housing
AD1242 Pan/Tilt (Rear View)
"Feed-Through" Wire Harness
230VAC, 50/60Hz Input
Power Bundle
Bundle 4
AC AC
W B S
24Volts AC Output
MAXIMUM DISTANCE between AD1242 and ADS1691FX is 5000 Ft, using shielded, 18 AWG cable
W B S
CODE LED
J6
230V, 50/60Hz Input
Sensormatic Model# 0300-0914-02 Transformer
ADS1691FX Control Code Distributor
* = 120 Ohm Termination Required (see Pages 4 and 5)
S W * B AC AC
1 2 3 4 5 6
COM
12V
CONTROL CODE SOURCE
W
B
S
12Volts AC Output
Maximum Distance between ADS1691FX and Code source is 5000 Ft, using shielded, 18 AWG cable


AD1270 Series
Pan/Tilt Backbox
3/4" Weather-proof Fitting
3/4" Weather-proof Conduit
120VAC, 50/60Hz
Input
Coaxial Video Cable
AC AC
W B S
24Volts AC
Output
MAXIMUM DISTANCE between
AD1270 Series and AD1691 is 5000 Ft,
using shielded, 18 AWG cable
W B S
CODE LED
J6
AD1691 Control
Code Distributor
* = 120 Ohm Termination
Required (see Pages 4 and 5)
S * W B AC AC
120VAC, 60Hz
Input
TP8002
Transformer
CONTROL CODE
SOURCE
W
B
S
Maximum Distance between
AD1691 and Code source is 5000 Ft,
using shielded, 18 AWG cable
12Volts AC
Output

TYPICAL SYSTEM CONNECTIONS
ADS1691FX CONTROL CODE DISTRIBUTOR TO AD1270 SERIES DOME



Declaration of Conformity

Manufacturer:

Sensormatic CCTV Systems Division

Manufacturer's Address:

Sensormatic CCTV Systems Division
1 Blue Hill Plaza
Pearl River, New York, 10965 USA

Sensormatic CCTV Systems Division
600 Bradley Hill Road
Blauvelt, NY 10913 USA

Sensormatic Electronics Corporation
State Rd. 110 Km 5.8
Poblado San Antonio
Aguadilla P.R. 00690

Sensormatic Electronics Corporation (IRL) LTD
Melbourn Road, Bishopstown
Cork, Ireland

Declares, that the product(s) listed below:

Name/Type:	Code Distribution Unit
Model Number:	ADS1691FX

complies with the EMC Standards EN55022 (Class B), EN50082-1, and also complies with the following safety standard: EN60950.

The Code Distribution Unit is provided with an external power supply, Sensormatic model 0300-0914-02.

Additional information:

This product herein, complies with the requirements of the EMC Directive 89/336/EEC, and with the Low Voltage Directive (LVD) 73/23/EEC. The equipment was tested in a typical configuration.

Pearl River, NY, USA 28 February, 1997

Ed Thompson
Engineering Manager

European Contact: Sensormatic GmbH
Am Schimmersfeld 7,
40880 Ratingen, Germany

SPECIFICATIONS:

Electrical Ratings:	AD1691	12 VAC, 60 Hz, 5 W
	ADS1691FX	12 VAC, 50/60 Hz, 100 mA, EU Compliant
Mounting:	Surface Mount, Indoor	
Weight:	10 lbs. aprox. (4.5Kg)	
Size:	12” H x 4” D x 14” W (305mm x 102mm x 356mm)	

An **American Dynamics** Product
Designed and built by
Sensormatic CCTV Systems Division
One Blue Hill Plaza
Pearl River, New York, 10965
(914) 624-7600
Technical Support Center: 1-800-442-2225
FAX: 914-624-7685

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